

REMARKS

Claims 1-30 are pending in this application. Claim 1 is cancelled, and claims 2-28 are amended, where necessary, to now depend from claim 30. Claims 7 and 10 are amended to correct typographical errors. Thus, claims 2-30 are at issue.

Claim 30 is amended to recite that “coefficients are used,” instead of “coefficients may be used,” as suggested by the Office action. Claim 30 is also amended to recite that “the coefficients are used to determine any one of an impurity on the surface of the obstacle, an optimum position of a sensor for determining a characteristic of the obstacle, *and* to display a map of a region of three dimensional space indicating the value of the physical quantity at a plurality of locations of the three dimensional space,” as suggested by the Office action. Thus, the informalities objected to with respect to claim 30 are now moot and the objections of claim 30 should be withdrawn.

Claim 1, and claims 2-28 depending therefrom, is rejected under 35 U.S.C. § 101 for being directed to non-statutory subject matter. Claim 1 is cancelled herein without prejudice and claims 2-28 are amended, where necessary, to now depend from claim 30. Thus, the rejection of claims 1-28 with respect to 35 U.S.C. § 101 is now moot and should be withdrawn.

Claim 30 is rejected under 35 U.S.C. § 112, second paragraph, for being indefinite with respect to the limitation of a physical quantity. Claim 30 is amended to now recite that the physical quantity is any one of an electrostatic potential, an electromagnetic potential, or an acoustic pressure, thereby specifically and positively reciting the types of physical quantities used in the method. Applicants thus submit that claim 30 is definite under 35 U.S.C. § 112, second paragraph and is now in condition for allowance. Accordingly, claims 2-28, which now depend from claim 30, are also in condition for allowance.

Claim 29 is amended to conform with the limitations of claim 30. In particular, claim 29 is amended to recite that the coefficients of said second column matrix are evaluated to determine at least one of an impurity on the surface of the obstacle, an optimum position of a sensor for determining a characteristic of the obstacle, or to display a map of a region of three dimensional space indicating the value of the physical quantity at a

plurality of locations of the three dimensional space (please refer to part d of the claim). As discussed in the previous office action, the values of the physical quantity of the secondary wave at a location in space provide useful information on the state of the object or a surrounding field of the object. In particular, the physical quantity may be, for example, an electrostatic potential, a magnetic potential, an acoustic pressure, etc. Thus, in one application, the claimed method may be used to display a map of an electrostatic potential, a magnetic potential, an acoustic pressure, etc. surrounding the obstacle. Another application of the values of the physical quantity may be to find an optimal position for a sensor used to monitor a state of the object. In another application, the values of the physical quantity may be used to determine a inhomogeneity of the obstacle. Thus, the recited coefficients of the second column matrix that correspond to values of a physical quantity of a secondary wave emitted by an obstacle in a region of three-dimensional space provide a useful, tangible, and concrete result. It follows that claim 29 is directed to patentable subject matter under 35 U.S.C. § 101 and the rejection should be withdrawn.

Claim 29 is also amended to recite that the physical quantity is any one of an electrostatic potential, an electromagnetic potential, or an acoustic pressure, thereby specifically and positively reciting the types of physical quantities used in the method. Thus, claim 29 is allowable in view of 35 U.S.C. § 112.

CONCLUSION

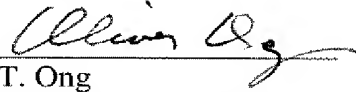
Applicants submit that this case is in a condition for immediate allowance. For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request reconsideration and allowance of rejected claims 2-30.

If there are matters that can be discussed by telephone to further the prosecution of this application, Applicants respectfully request that the Examiner call its attorney at the number listed below.

The Commissioner is authorized to charge any fee deficiency required by this paper, or credit any overpayment, to Deposit Account No. 13-2855.

Dated: November 1, 2007

Respectfully submitted,

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